

CLIMATE INDUCED DISPLACEMENT



**CASE STUDY OF CYCLONE AILA
IN THE SOUTHWEST COASTAL REGION
OF BANGLADESH**

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**case study of cyclone Aila
in the southwest coastal region
of Bangladesh**

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CLEAN (Coastal Livelihood and Environmental Action Network) is a right-based organisation working in southwest coastal region of Bangladesh for social transformation through playing pro-people role in the issues of forest and biodiversity, climate change, agriculture, indigenous knowledge and peoples capacity building. This study report on Climate Induced Displaced People focuses on the forced migrated people by cyclone Aila in the southwest coastal region of Bangladesh and published by its own fund.

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FORWARD

A stream of moving people was leaving the cyclone Aila affected areas, especially from Shyamnagar, Dacope and Koyra Upazila of the southwest coastal region of Bangladesh, and it was happening in mid-2009 before the eyes of journalists, development activists and the authorities. What are the causes behind the scene and where were they going? What are the situation they facing in new places? These are the key questions from where this study started.

Climate Change is one of the major issues which are shaking the world and deteriorating all of the natural and manmade elements which are essential to the human being for civilization. Continuously increased temperature of the globe is creating climate catastrophes and Bangladesh is one of the most vulnerable countries which are facing the adverse impacts like cyclone, tidal surges and riverbank erosion. The weather pattern has been changed and is affecting traditional agriculture and natural resource dependant peoples, who are the poorest and deprived part of the society.

All of the Shyamnagar, Dacope and Koyra Upazilas are adjacent to the Sundarbans, the largest single tract mangrove forest in the world, and exposed to the Bay of Bengal. Most of the inhabitants of these areas are small and marginal farmer, fisher, forest resource dependent communities and indigenous Munda people. Taking the opportunity of salinity intrusion, influential people started brackish water shrimp farming with active support from MDBs and GOB. It changed the total scenario. The marginal farmers, share-croppers and agricultural labourers were forced to shift their livelihoods to shrimp-fry collectors.

This region has been suffering from flooding of saline water since last couple of decades. Added to that, due to sea level rise, the high-tide level has been raising and collapsing coastal embankments, which causes these floods and expanding day-by-day. In last week of May 2009 the cyclone Aila hit the said Upazilas and caused death of 193 people. Though death of human being cannot alter with any cost, the severity of Aila was exposed in different forms. More than 700 kilometre of embankment breached and more than 300 thousand people were displaced. Among them, more than 100 thousand people had to migrate and took shelter in nearby towns and cities including the neighbouring country.

A few researches and studies have been done on environment and/or climate change induced or forced migration, refuge and displacement in Bangladesh (Ahmed et al. 2008; Ali et al 1998; Elahi et al., 1990; Haque, 2003). Almost all of the studies used secondary data for socioeconomic, scientific and policy analysis and recommendations. This study may be the first step to examine the socio-economic situation of the forced displaced people through a participatory approach.

I would like to pay my hearty thanks to Oxfam Policy and Advocacy Manager Ziaul Hoque Mukta and his team members for technical and financial support to publish this study. Special gratitude goes to Oxfam volunteer Sayeeda Farhana for her work in "Climate Change Induced Displacement, Women & Children Vulnerabilities and Women Adaptation (Oxfam, 2010)" which helped us a lot to prepare this document. Special thanks to environmental researcher and Khulna University teacher Kushal Roy for his significant contribution in this study. Thanks to Khulna University student Anup Kumar Nag and my colleagues for their hard work in data collection and synthesis.

Critique from readers, activists and academicians are highly solicited to improve this document in future.

Thanks to all

Hasan Mehedi

Chief Executive, CLEAN
Khulna: 10 July 2010

ABBREVIATIONS & ACRONYMS

BAPA	Bangladesh Poribesh Andolon (Bangladesh Environmental Movement)
BBS	Bangladesh Bureau of Statistics
BCCSAP	Bangladesh Climate Change Strategy and Action Plan
BEN	Bangladesh Environmental Network
KUET	Khulna University of Engineering and Technology
BMD	Bangladesh Meteorological Department
BWDB	Bangladesh Water Development Board
CEGIS	Centre for Environment and Geographical Information Services
CEJ	Centre for Environmental Justice
CEP	Coastal Embankment Project
CGC	Centre for Global Change
CHT	Chittagong Hill Tracts
CIDP	Climate Induced Displaced People
CSRL	Campaign for Sustainable Rural Livelihoods
DMB	Disaster Management Bureau
EDP	Environmentally Displaced People
EJF	Environmental Justice Foundation
EPI	Extended Programme for Immunization
EquityBd	Equity and Justice Working Group Bangladesh
ERTB	Environmental Refugee To-Be
FAO	Food and Agricultural Organisation of United Nations
FGD	Focus Group Discussion
GCRP	Global Change Research Program
GOB	Government of Bangladesh
HSC	Higher Secondary Certificate
IDP	Internally Displaced People
IOM	International Organisation for Migration
IPCC	Inter-governmental Panel on Climate Change
JTWC	Joint Typhoon Warning Center
KCC	Khulna City Corporation
MDB	Multilateral Development Bank
MOEF	Ministry of Environment and Forest

MOF	Ministry of Finance
MOFDM	Ministry of Food and Disaster Management
MVC	Most Vulnerable Country
NAPA	National Adaptation Plan of Action
PRA	Participatory Rural Appraisal
SLR	Sea Level Rise
SST	Sea Surface Temperature
Tk.	Taka (Bangladeshi Currency)
TRM	Tidal River Management
UNEP	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNHCR	United Nations High Commission for Refugees
UP	Union Parishad
UPHCP	Urban Primary Health Care Programme
UPZ	Upazila Parishad
US	United States
WASA	Water and Sewerage Authority

GLOSSARY

Aman	One of the major rice varieties of Bangladesh sowed in June-July and harvested in October-November.
Annex-1 Countries	The developed and industrialised countries who are responsible for historical Greenhouse Gas emissions; and responsible to reduce emission and to help the developing countries according to UNFCCC.
Taka	Bangladeshi Currency; 1 US Dollar is equal of 69 Taka (according to January 2010)
Thana	Police Station; in rural areas, Upazila is a jurisdiction area with one or more Thana while in urban areas Thana is an administrative jurisdiction area which contains almost same population of the Upazila.
Union Parishad	Union Council; the lowest tier of local government institutions consist of 13-20 villages within 9 Wards and governed under the Upazila Parishad.
Upazila Parishad	Sub-district Council; mid level tier of the local government institutions consist of 5-14 Union Parishads and governed under the District. However, Bangladesh has 64 Districts under 7 Divisions namely Barisal, Chittagong, Dhaka, Khulna, Rajshahi, Rangpur and Sylhet.

PART 1

INTRODUCTION

1.1 Background

Migration is a flexible and dynamic phenomenon that encompasses territorial mobility of the people and involves movements like commuting, absence from home place for periods from a couple of days to several years, seasonal migration and permanent relocation¹. People are always migrating from one place to another since the very beginning of human history as the earth's climate has never been stable.

Human migration is related with some push factors like lack of opportunities, primitive conditions, political fear or persecution, poor medical care, loss of wealth, death threats, lack of political or religious freedom, poor housing, tenant issues, bullying, discrimination, lack of access to resources, lack of economic opportunities and poor chances of marrying including some environmental issues like desertification, famine or drought, natural disasters and destructive pollution².

People also migrate due to some pull factors like higher education opportunities, better job opportunities, better living conditions, political and religious freedom, enjoyment, education, better medical care, attractive climates, security, family links, industry and better chances of marrying³. Some intervening factors that facilitate or restrict migration include ease of transportation, family or social networks, economic ties and government policies such as trade and investment linkages, or social and cultural exchanges.⁴ The most frequently quoted determinants which play significant roles in the origin of human migration flows are economic and social, political, demographic, environmental and psychological (psycho-social) determinants⁵.

From very early ages of the civilization, environment is a factor of migration. But in the 21st century the environmental changes become significant push factors in many countries. This push factors include (a) natural disasters (b) development projects that involve changes in the environment (c) progressive evolution of the environment and (d) environmental consequences due to conflicts⁶. Due to extreme climatic events, which are treated as natural disasters, are increasing and causing forced migration of the poorer and natural resource dependant people from their ancestral homes.

Climate change, on its own, does not directly displace people or cause them to move but it produces environmental effects and exacerbates current vulnerabilities that make it difficult for people to survive where they are. Climate change is expected to make the world hotter, rainfall more intense, and result in more extreme weather

¹ Asiatic Society of Bangladesh (2006). Rural-Urban Migration (cont. Rita Afsar). Asiatic Society of Bangladesh. Dhaka.

² J. Sward, R. Black, D. Kniveton, and KS Verkerk (2008). Migration and Climate Change: How will Climate Shifts Affect Migration Trends?. University of Sussex. Brighton.

³ Everett S. Lee (1966). A Theory of Migration. Retrieved April 13, 2010 from www.students.uni-mainz.de/jkissel/Skripte/Lee.pdf

⁴ J. Sward, R. Black, D. Kniveton, and KS Verkerk (2008). *ibid*

⁵ R. Stojanov (2005). Environmental Migration-How Can Be Estimated and Predicted? Palacky University. Olomouc.

⁶ E. Piguet (2008). "Climate change and forced migration", New Issues in Refugee Research. Research Paper No. 153. United Nations High Commissioner for Refugees. Geneva: January 2008.

events such as droughts, storms and floods. These changes, in turn, will likely result in further population movements. According to the UNISDR – storms, floods and droughts – have increased threefold over the past 30 years⁷.

1.2 Climate Induced Displaced People: Debates and Definition

Climate Induced Displaced People (CIDP) is a very recent term in the development arena. The United Nations' 1951 Convention and 1967 Protocol relating to the status of refugees do not allow *Climate Migrants* as a *Refugee* under this convention. However, the official definition of refugee is based on very narrow legal concern recognized under the Geneva Convention that characterize 'refugee' as;...'a person who is outside of his or her country of nationality or habitual residence, and cannot rely on his or her home state for the fear of maltreatment'⁸.

Later, many terms became cited in literatures, research papers and campaign materials, as a cluster of similar categories, including 'forced environmental migrant, environmentally motivated migrant, climate refugee, climate change refugee, climate induced migration, climigrant, climate change displaced people, environmentally displaced person (EDP), disaster refugee, environmental displace, eco-refugee, ecologically displaced person and environmental-refugee-to-be (ERTB)'. There is no authoritative definition or consensus regarding the terms and there are some significant differences between the terms.

However, some governments [e.g. Global Change Research Program (GCRP), US Government], international organizations [e.g. Friends of the Earth, Environmental Justice Foundation (EJF), Centre for Environmental Justice (CEJ)] and UN Refugee Agency (UNHCR) Chief warns emergence to meet the emerging problems of climate displaced people⁹.

Famous US environmentalist and the founder of the Earth Policy Institute Lester Brown used the term of Environmental Refugee to attribute the emergence of addressing displaced people forced by environmental degradation and impacts of climate change¹⁰. In 1985 El-Hinnawi supported him in a United Nations Environmental Programme (UNEP) report on Environmental Refugee¹¹. Professor Norman Myers also treats them as Environmental Refugees and defines as, the "people who can no longer gain a secure livelihood in their homelands because of drought, soil erosion, desertification, deforestation and other environmental

⁷ IOM (2009). Migration, Environment and Climate Change: assessing the evidence. International Organization for Migration. Geneva.

⁸ United Nations General Assembly resolution 429(V) of 14 December 1950, available at <http://www.unhcr.org/refworld/docid/3b00f08a27.html>

⁹ UNHCR (2009). "Climate change could become the biggest driver of displacement". Retrived on 12 January 2010 from <http://www.unhcr.org/4b2910239.html>

¹⁰ L. Brown, P. Mcgrath, and B. Stokes (1976). Twenty two dimensions of the population problem. Worldwatch Paper 5. Worldwatch Institute. Washington DC.

¹¹ Essam El-Hinnawi (1985). Environmental Refugees. United Nations Environmental Programme

problems, together with associated problems of population pressures and profound poverty"¹².

Some academicians including campaigners are trying to define Climate Migrants as someone displaced by climate change induced environmental disasters. Such disasters are the result of incremental and rapid ecological change and disruption that include increased droughts, desertification, sea level rise, and the more frequent occurrence of extreme weather events such as hurricanes, cyclones, flooding and tornados¹³. An Indian ecologist Architesh Panda wrote an excellent article on difference between environmental refugee and climate refugee where he concluded that 'the term environmental migrant is kind of a cop-out. Climate refugee is a stronger, more urgent term; many of these people need immediate recognition and attention, not just with feeding programs but for the rich nations to open their doors like they did to the Vietnamese boat people or other refugees'¹⁴.

Considering the legal concern on the term 'refugee', some international organizations are trying to treat climate change induced forced migrants as 'environmentally displaced person' which is in line with the mandates of the UNHCR's Internally Displaced Persons (IDPs). But the global leaders showed less responsibility to mitigate the crisis¹⁵. Climate induced forced migrants and IDPs falling within the same category may undermine notion of justice to the climate change induced migrants and, again, the definition of these two that are not clearly recognizable may not receive appropriate assistance¹⁶. While, a group of experts express that the term "environmental refugee" is confusing and inaccurate because people forced to flee their countries due to natural disasters weren't entitled to international protection and assistance under refugee law¹⁷.

However, the Government of Bangladesh does not recognize status of CIDPs but as Environmental Refugee¹⁸. In Bangladesh Climate Change Strategy and Action Plan (BCCSAP) the Bangladesh Government expressed its concern about forced displacement and urges necessity of addressing the issue with rights of free mobility for these people¹⁹.

Given the inappropriateness of terminologies, the CIDPs are in need of new legal recognition that will raise a sense of global responsibility and accountability, as well

¹² N. Myers (2005). "Environmental Refugees: An Emergent Security Issue". presented in 13 Economic Forum, 23-27 May 2005, Prague. (Retrieved from: www.osce.org/documents/eea/2005/05/14488_en.pdf) on December 13, 2009

¹³ Global Greenhouse Warming.com, (2010). Climate Refugee. Retrieved from [global-greenhouse-warming.com: http://www.global-greenhouse-warming.com/climate-refugee.html](http://www.global-greenhouse-warming.com/climate-refugee.html) on August 13, 2010.

¹⁴ A. Panda (2010). Climate Refugees: Implications for India. *Economic and Political Weekly*. pp 76-79.

¹⁵ J. McGregor (1994). 'Climate Change and Involuntary Migration: Implications for Food Security. *Food Policy* 19, no 2

¹⁶ O. Dun & F. Gemene (2008). Defining 'environmental migration', *Forced Migration Review*. October 2008, Issue 31; www.fmreview.org

¹⁷ E.Ferris (2007). Lecture on "Making Sense of Climate Change, Natural Disasters, and Displacement: A Work in Progress". in winter course, Calcutta Research Group, December 14, 2007

¹⁸ Government of Bangladesh (2009). Bangladesh Climate Change Strategy and Action Plan (BCCSAP). Ministry of Environment and Forest. Dhaka: September 2009.

¹⁹ Government of Bangladesh (2009). *ibid*

as a sense of urgency for impending disasters²⁰. However, the term CIDP is more appropriate than the other terms as it triggers on the causes directly and the word 'Displacement' means 'forced migration'. Anyone can migrate intentionally for some pull factors towards fame, advanced livelihood and civic opportunities etc. But the word 'Displacement' is totally involuntary and it means something forced a person to take shelter in a different place. Thus the term 'Climate Induced Displaced People' has been used in this study to define the people who lost their ancestral homes due to climate induced disasters and forced to migrate internally and to neighbouring regions.

1.3 Emergence of the Issue

Climate induced disastrous weather events including increasing salinity intrusion and change of weather pattern are seriously affecting the socioeconomic situation of poorest natural resource dependent people of low lying least developed countries (LDCs) and developing island states. A British-based aid agency Christian Aid estimates about 250 million people permanently uprooted by climate change-related phenomena by 2050²¹ while Myers (2005) estimated it as one of every forty five people of the world²². These are the people who have been forced to leave their traditional habitat, temporarily or permanently, because of some lack of natural resources and/or an environmental disruption that jeopardized their existence and seriously affected the quality of their life. Region is not able to ensure them safe livelihood.

According to some researcher and advocates, climate change cannot be proved as a driver of forced migration because it has been observed that frequent migration happened in those countries where political instability is high²³. But the ecologists and climatologists have already proved that climate change has a role in accelerating migration, especially in the Most Vulnerable Countries (MVCs)²⁴. According to Norwegian Refugee Council (NRC), more than 42 million people were displaced in 2010 by natural disasters in which more than 38 million by climate related disasters. Out of 42 million, 569 thousands were only from Bangladesh²⁵.

In its first assessment report in 1990, the IPCC made a specific link between migration and climate change, saying its effects could displace millions²⁶. The United Nations High Commissioner for Refugees also warned the world leaders about increased number of refugees in the recent years due to adverse impacts of climate

²⁰ S. Maria (2008). Forced Migration Review. Issue 31. October 2008.

²¹ Christian Aid (2007). Human Tide: The Real Migration Crisis. London.

²² N. Myers (2008). Climate Change and Forced Migration: Scale of Challenges. Climate Change and Forced Migration (p. 26). Institute for Public Policy Research (IPPR). London.

²³ <http://www.ippr.org/uploadedFiles/research/researchteams/pprcfmtranscript.pdf>

²⁴ <http://www.guardian.co.uk/global-development/poverty-matters/2010/nov/12/dhaka-climate-court-criminals>

²⁵ Norwegian Refugee Council (2011). Factsheet: In 2010, more than 42 million people were displaced by natural disasters. www.nrc.no/arch/img/9570202.pdf

²⁶ IPCC (1990). First Assessment Report, (retrieved from "Tipsheet - Six questions about climate refugees", Reuters AlertNet, March 13, 2008). Inter-governmental Panel on Climate Change.

change²⁷. Professor Doos projected that in the future the refugees may be forced to move considerably farther away from their country of origin²⁸. For this reason, it seems to be important to deal with predicting climate migration and identifying vulnerable regions and future 'hot spots' of insecurity and potential environmental migration/refugee pressure²⁹.

In these circumstances, the environmental activists, policy makers, climate advocates, indigenous peoples' representatives, fishermen groups and international green organisations demanded a different UN protocol on Climate Induced Migrants³⁰.

1.4 Bangladesh Perspective

Bangladesh is one of the MVCs for climate induced hazards. According to the Climate Risk Index 2011 of Germanwatch, Bangladesh is the top sufferer of last decade (1999-2009) in the world due to climatic disasters³¹. The World Bank also listed Bangladesh in top MVCs for flooding, cyclone and storm surges³². Combining science with economics related with climate change impacts from the academic perspective, Professor Caroline Sullivan rated Bangladesh as the most vulnerable country of the world³³. So, it is a consensus now that Bangladeshi poor people are facing hell-like sufferings for climate change induced hazards³⁴.

As an evidence of early climate change, people along in the coastal zone bear testimony to rapid erosion of coastal islands, which may be attributed to aggressive wind-wave interaction with the coastal shorelines under a higher sea surface temperature regime³⁵. It has been reported that the sea-surface temperature (SST) has been increasing over the past four decades along the Northern Indian Ocean, including the Bay of Bengal³⁶. Higher SST driven rough sea events have been causing enormous problems to the fisher-folk communities coastal Bangladesh³⁷.

It is already reported that fishermen are under high debts as a consequence of loss of livelihoods due to the increased rough sea events and many of them are

²⁷ UNHCR (2009). "Statement by Antonio Guterres, UN High Commissioner for Refugees". Copenhagen: December 2009

²⁸ Bo R. Doos (1997). Can large scale environmental migrations be predicted?. *Global Environmental Change*. Vol. 7, No.1, pp. 41-61.

²⁹ J. Sward, R. Black, D. Kniveton, and KS Verkerk (2008). *ibid*

³⁰ F. Biermann & I. Boas (2008). Protecting Climate Refugees: The Case for a Global Protocol. International Voluntary Movement. Canberra: November 2008

³¹ S. Harmeling (2010). Global Climate Risk Index 2010, Germanwatch. Bonn.

³² <http://southasia.oneworld.net/globalheadlines/world-bank-lists-most-vulnerable-countries-to-climate-change>

³³ http://www.scu.edu.au/news/media.php?item_id=1458&action=show_item

³⁴ K. Roy & U. T. Sultana (2010). Climate Change Disasters and Rural Poverty: Case of Coastal Bangladesh. Third International Conference on Bangladesh Environment. BAPA-BEN. (p. 13). Dhaka.

³⁵ A. U. Ahmed (2008). Assessment of Vulnerability to Climate Change and Adaptation Option for the Coastal People of Bangladesh. Practical Action Bangladesh. Dhaka.

³⁶ M. Khole (2005). Inter-annual and Decadal variability of Sea Surface Temperature (SST) Over Indian Ocean. *Mausam*. 6(4):804-801.

³⁷ A. U. Ahmed & S. Neelormi (2007). Livelihoods of Coastal Fishermen in Peril: In Search of Early Evidence of Climate Change Induced Adverse Effects in Bangladesh. Campaign for Sustainable Rural Livelihoods (CSRL) and Centre for Global Change (CGC). Dhaka.

contemplating out-migration from the coastal zone³⁸. Hazards such as floods, river erosion, water logging, drought, cyclonic storm surge, etc, are known phenomena in the monsoon influenced riverine landmass of Bangladesh, which is also known for its high population density, flat topography and low elevation. As an aftermath of a hazardous event, often beyond the inherent coping capacity of poor households, it becomes difficult to maintain livelihoods, which in turn trigger out-migration³⁹.

Gravgaard and Wheeler reported that only riverbank erosion alone displaces 50-200 thousand people of Bangladesh each year⁴⁰. Cyclone and Storm surge activity in Bangladesh will force at least 20 million Bangladeshis on the move, with ramifications for food and water supplies as well as disease epidemics⁴¹. A large percentage of the population of Bangladesh may be forced to move. Bangladesh Government is also concerned about the displaced people due to adverse impacts of climate change. It is estimated that more than 200 million people may be displaced permanently from their traditional habitat due to cyclone, tidal surge and river bank erosion combined with high saline water intrusion⁴².

It is predicted that 17% of the coastal area of Bangladesh may be inundated by 2050 if global warming cannot be reduced. In that case, the migration scenario might be worsened⁴³. A reputed international organisation Oxfam projected that in the light of Bangladesh's extreme impacts may displace 600 thousand people per year⁴⁴.

It is a tough situation for LDCs like Bangladesh to manage the problems of huge migration. There are some major problems related with the forced migration: in which resettlement takes the top place. Since being a least developed country, Bangladesh is quite unable to take resettlement measures due to shortage of finance and land resources (which is much more valuable for food security).

The administrative management is another big question. A mammoth amount of money needed for building civic infrastructures like housing, electricity, water and sanitation facilities which are quite difficult for Bangladesh. The other questions like adapting with new social environment, employment and behaviour of local people with the settlers and social unrest are a risk of resettlement as Bangladeshi society is not multidimensional.

The last but not the least question is related with the policy arrangement. Bangladesh is facing decade-long clash between the settlers and local indigenous inhabitants of Chittagong Hill Tracts (CHT). The newly migrated people may create more clashes on all over the country. So, a different global policy under UN system is essential now for the CIDPs as the UNFCCC process is totally failed to address the issue due to its lengthy negotiation of mitigation, adaption and climate financing.

³⁸ A. U. Ahmed & S. Neelormi (2007). *ibid*

³⁹ A. U. Ahmed & S. Neelormi (2008). Climate Change, Loss of Livelihoods and Forced Displacements in Bangladesh: Whither Facilitated International Migration? Centre for Global Change (CGC) and Campaign for Sustainable Rural Livelihoods (CSRL). Dhaka.

⁴⁰ A. K. Gravgaard & W. Wheeler (2009). Bangladesh fights for survival against climate change, Washington Post, October 18, 2009 (retrieved from <http://www.washingtontimes.com/news/2009/oct/18/bangladesh-fights-survival-against-climate-change/?page=1>) accessed on December 19, 2009.

⁴¹ FFF (2008). "What to Do About It; How to Do It". retrieved from Executive Summary of workshop on Anthropogenic Climate Destabilization: A Worst-case Scenario. Foundation for the Future. Washington: December 2008

⁴² Government of Bangladesh (2009). *ibid*

⁴³ N. Stern (2006). Stern Review on the Economics of Climate Change. London. October 2006

⁴⁴ <http://www.odvce.monash.edu.au/oxfam/news.html>

1.5 Purpose of the Study

The purpose of this study is to explore the present situation of the migrated people from cyclone Aila affected areas. Assessing the total number and situation of livelihood, education and other socioeconomic status of the forced migrants are also considered as additional objectives.

Though a number of studies have been done in Bangladesh on IDP and CIDP, working with the victims directly is very rare. As one of the MVCs Bangladesh has needed this type of research immediately for the better planning which will be incorporated in the national policies level for developing rules and regulations to resettle the CIDPs from different 'hotspots' of climate change. It is also necessary to estimate alternative and additional management of essential services, housing, legal procedure and secured livelihood.

Bangladesh is already experiencing recurrent floods, severe cyclones, tidal surges, water logging, salinity intrusions, droughts, and river bank erosions which are adding more displacements of the people from vulnerable areas.

This study is a first step to identify the problems behind displacements forced by impacts of climate change and existing problems in the areas where the people take shelter after leaving their ancestral home. This study will help the advocates and policy makers to know about the extra pressure faced by the migrants and what type of policy reform and physical initiatives are needed to ensure basic human rights, essential state services and livelihood opportunities for the CIDPs who are now homeless.

PART 2

OBJECTIVES AND METHODOLOGY

2.1 Objectives

The major objective of the study to find out the causes which derived the displaced people to migrate from the area and the problems they are facing in the destination. The specific objectives of this study are:

- i. To understand the causes of displacements of the Migrants of cyclone Aila;
- ii. To explore the socioeconomic situation of the displaced people after migration;
- iii. To track the trend of displacements of the migrants of cyclone Aila; and
- iv. To recommend national and international policies reformation for CIDPs.

2.2 Materials and Methods

This study mainly follows some specific methods to evaluate the exact purposes. Actually the study deals with the cyclone Aila migrants of the southwest coastal region who have taken shelter in the Khulna city after forcibly displaced from their traditional home. Information and data is collected from both primary and secondary sources for cross-checking and interpretation. Primary data has been collected from Questionnaire Survey and Focus Group Discussions (FGDs) and Case Stories from the Aila migrants in the Khulna city.

Secondary data and information have been collected from published books, literatures, websites, national and international organisations, Government Offices like Bangladesh Bureau of Statistics (BBS), Bangladesh Water Development Board (BWDB), Disaster Management Bureau, Ministry of Food and Disaster Management and Upazila Administration.

First of all, a reconnaissance survey was done to develop the questionnaire. Then the final survey was done with 145 family members of 41 Households (HH). Besides of the Questionnaire Survey, Five FGDs were arranged to get informal opinions from the respondents. In the FGDs, the respondents expressed the severity of the problems and discussed with many other issues not covered by the questionnaire.

To represent the humanitarian situation of the displaced people 10 case stories were also collected. Data collected were analysed through statistical models and interpreted based on their merits.

2.3 Study Area and Communities

The study has been conducted among the cyclone Aila displaced people who had taken shelter in Khulna City and adjacent areas. Khulna city (22.46-22.58°49'0"N 89.28-89°37'0"E) is the third largest metropolitan city of the country. It is also a divisional city. The total area of Khulna City Corporation is 59.57 km² with 1,400,689 population in which 52.79% male and 47.21% female⁴⁵. Literacy rate of Khulna City is 59.10%⁴⁶ which is higher than average national literacy rate but lower than other big cities i.e. Dhaka and Chittagong⁴⁷.

Though Khulna is known as as Industrial City with state owned 13 Jute Mills, Newsprint Paper Mill, Textile Mill, Match Factory, Shipyard and Oxygen Company, the city looks like dead after continuous shrinking and stopping of productions of the mills and factories since last two decades. On the other hand, reputation of Khulna is growing as City of Shrimps, because 75% of all shrimps exported from Bangladesh are cultivated and processed in the Khulna zone⁴⁸.

The number of slum dwellers and floating people are increasing day by day due to unexpected shutdown of the mills and industries of the city⁴⁹. The jobless industrial labourers are becoming Rickshaw Van Puller, Daily Labourer, Hawker and Porter for their subsistence. As a result the economy of Khulna city is degrading and social unrest are increasing due to boom of extreme poverty. According to KCC, the total number of Rickshaw in the city is 17,000⁵⁰, whereas estimates of independent sources it is not less than 40,000. Since a major part of these Rickshaw Pullers are unskilled, road accidents are increasing day-by-day at an alarming rate⁵¹.

Population density of Khulna City is 67, 994/km² in which more than 27% of this total population lives in 147 slums⁵². Due to population boom and increasing poverty in the Southwest Coastal Region of Bangladesh, the urban areas are expanding to the city-adjacent areas of Batiaghata, Dumuria, Rupsa and Phultala Upazila without any citizen services e.g. water supply, sanitation system, communication and transportation. The poorest labourers have started living in these areas. That is why, the city adjacent areas are considered as study area in this study.

The study is conducted in the slums of Khulna city where the cyclone Aila victims had taken shelter after losing their houses and traditional occupations. According to the pilot survey undertaken in this study, 41 slums were found where the Aila migrants have taken shelter. Besides, 4 FGDs were organized in the affected areas i.e. Gabura Union under Shyamnagar Upazila, Koyra Sadar and Uttar Bedkashi Union under

⁴⁵ Khulna City Corporation (Undated). www.khulnacity.org accessed on December 20, 2009

⁴⁶ Wikipedia (undated.a). http://en.wikipedia.org/wiki/Khulna_City accessed on December 20, 2009

⁴⁷ BBS (2003). Report of Population Census 2001. Bangladesh Bureau of Statistics. Dhaka

⁴⁸ Wikipedia, (undated.a). *ibid*

⁴⁹ S. Saadi (2007). Paat Hottar Nepothye (Behind story of killing the Jute Sector, in Bangla), Dhaka, December 2007

⁵⁰ Khulna City Corporation (Undated). *ibid*

⁵¹ S. Ashraf Shelley (2009). "Mohanogorir Rickshawbarha Niye Osthirota Barhchhe" (City unrest increasing with the Rickshaw Fare in Bangla). Daily Probaha. Khulna: 25 June 2009

⁵² J. Feyen (2008). Water and Urban Development Paradigms: Towards an Integration of Engineering. International Conference on Water and Urban Development Paradigms. September 2008.

Koyra Upazila and Kamarkhola Union under Dacope Upazila to find out the hidden causes of forced migration.

Table 1: The Study Area

District/City	Upazila/Thana	No. of Slums	%	No. of Families	%
Khulna City	Khulna Sadar	06	14.6	456	16.0
	Sonadanga	11	26.8	537	18.8
	Khalishpur	04	9.8	300	10.5
	Daulatpur	09	22.0	710	24.9
	Khanjahan Ali	03	7.3	198	6.9
Khulna District	Batiaghata	03	7.3	334	11.7
	Dumuria	01	2.4	115	4.0
	Rupsa	04	9.8	206	7.2
Total	8	41	100	2,856	100

2.4 Respondents of the Study

A total of 206 Aila migrants have participated in this study out of which 145 have stated their observations through Questionnaire Survey and 61 respondents have participated in FGDs. In addition, 10 case stories from 5 males and females were collected. To collect opinions from all of the age-ranges and gender of the respondents, adolescents were included in the Questionnaire Survey and FGDs.

Among the displaced people the number of females is almost same as the male counterparts. But due to social rituals and superstitions women are not interested to take part in any discussion with outsiders. As a result, numbers of male respondents are larger than female respondents in this study. Among the respondents 60.6% are male and 39.4% are female. On the basis of age classification 8.8% respondents are Adolescents with age range from 13-17 years. Besides 34.7% are in 18-20 years age, 38% are in 30-40 years, 11.1% in 40-50 and only 7.4% are aged more than 50 years.

Table 2: Number of Respondents

Methods	Gender	Age of Participants					Total	Grand Total
		13-17	18-30	31-40	41-50	50+		
Interview	Male	7	28	36	13	8	92	145
	Female	4	19	14	9	7	53	
FGD	Male	4	14	16	---	---	34	61
	Female	4	10	13	---	---	27	
Case story	Male	---	2	1	1	1	5	10
	Female	---	2	2	1	0	5	
Total	Male	11	44	53	14	9	131	216
	Female	8	31	29	10	7	85	
Grand total		19	75	82	24	16	216	

Among the interviewees, 63.4% are male and 36.6% are female. Social rituals of the affected areas and exposure capacity of women can be estimated from the participation. On the other side, amongst the participants of the study, 31-40 years age group is more than 37.96% while 34.7% is contributed by the 18-30 years age group. Out of all respondents almost 72% accounted in the age group of 18-40 years.

2.5 Limitations/Challenges

There are a number of challenges encountered by the study team. These are listed below:

- i. This study is conducted by using the data which is collected after seven months of occurrence of the Aila. Cyclone Aila hit the coast in 25th May 2009 and the data have been collected since 28th December 2009 to 7th January 2010. During publication process of the study report there is a little bit progress being seen; but this does not yet reverse the study results;
- ii. Respondents were living in a very vulnerable position during the study. For this reason, active participation of the Aila migrants was very tough. However, many respondents have participated in the questionnaire survey and FGDs with collaborative and helpful mind;
- iii. The numbers of cyclone Aila migrants are near about 14,551 in Khulna metropolitan city. Among them information has been collected from 216 persons which is only 0.12% of the total displaced people;
- iv. At first, the people of higher and middle classes have left the Aila affected areas and went to their relatives or rented houses in the city. They had taken shelter in the sophisticated areas of the urban areas. For this reason, it is not easy to identify these classes of people. As a result only floating inhabitants and slum dwellers have selected for data collection;
- v. There are no records in the KCC or other Government Offices on migrants from Aila affected areas. Consequently, the study team depended on the oral citations of respondents to select resettlement areas and respondents. That is why there is a possibility that the numbers (e.g., migrants, shelters etc.) stated in this study may increase.

PART 3

CYCLONE AILA AND DISPLACEMENT

3.1 Cyclone Aila: blaze beneath the Ash

The cyclone Aila (category-1 cyclonic storm)⁵³ hit the southwest coastal zone with a wind speed up to 120 km/h (75 mph) on 25th May 2009 when the people was trying to recover their normal life and livelihoods from the damage of super cyclone Sidr (category-4: JTWC-6B) which attacked the region just before 18 months on 15 November 2007⁵⁴. The death toll of cyclone Aila was 193⁵⁵, which is comparatively very low in Bangladesh perspective. But the loss of infrastructures, houses, institutions, cultivable land and crops, and livelihoods were simply destroyed the affected areas.

Four Upazilas under Khulna and Satkhira districts are the worst affected by the cyclone Aila and following storm surge. The Upazilas are Dacope and Koyra under Khulna district and Shyamnagar and Assasuni under Satkhira district. Total area of the affected four Upazilas is 4952.19 km² in which 3835 km² is the Sundarbans Mangrove Forest and 1,176 km² is populated area⁵⁶. The total agricultural land of these areas is 274,411.31 acre in which 13% is suitable for double crop and 7.2% for triple cropping⁵⁷. Total population of the areas are 794,565 in which 50.51% male and 49.49% female. The Hindu religious community members in the affected areas are larger than the national average. Besides, more than 3 thousand indigenous Munda community members live in Koyra and Shyamnagar Upazila⁵⁸.

Most of the poor communities depend on agriculture or natural resources for their subsistence. The rate of poverty in these areas is 48.65%⁵⁹ which have been increasing since last decade⁶⁰ due to environmental degradation by brackish water shrimp farming, continuous natural disaster and shrinking natural resources. 49.7% of total population is either landless or have only the homestead land. Among total labour force of the affected areas 40.09% marginal farmer and share-cropper, 20.14% agricultural labour, 6.72% daily labour, 19.86% forest resource users, 3.98% fisher flock and 11.12% engaged in other occupations⁶¹.

The areas are protected from tidal and storm surges by about 1200 kms coastal embankments in which 711 kms has been damaged fully or partially by the storm

⁵³ Wikipedia (undated.b). http://en.wikipedia.org/wiki/Cyclone_Aila

⁵⁴ http://news.bbc.co.uk/2/hi/south_asia/7100957.stm

⁵⁵ <http://www.cbc.ca/news/world/story/2009/05/29/india-cyclone-update.html>

⁵⁶ Government of Bangladesh (1986). Zilla Gazetteer - Khulna and Satkhira. BG Press. .Government of Bangladesh. Dhaka.

⁵⁷ BBS (2008). Bangladesh Agricultural Survey. Bangladesh Bureau of Statistics. Dhaka.

⁵⁸ BBS (2003). *ibid*

⁵⁹ Government of Bangladesh (2007). Economic Survey 2007. Ministry of Finance. Dhaka.

⁶⁰ BBS (2010). Report to the Ministry of Environment and Forest, retrieved from "Plan to Improve Economic Condition of the People of the Sundarbans". Bangladesh Bureau of Statistics. Daily New Nation, May 13, 2010

⁶¹ Asiatic Society of Bangladesh (2006). Banglapedia: the Encyclopaedia of Bangladesh. Dhaka

surge of cyclone Aila⁶². Due to elevation of the areas are below the mean sea level, whole the areas including agricultural and homestead land, roads and paths, educational institutions, local markets everything has gone under salty water just after collapsing of the embankments. 13 Unions out of forty under these four Upazilas has been flooded by the storm surge; 228 Villages damaged.

Table 3: Cyclone Aila affected areas

District	Upazila	No. of Total UP	No. of Affected UP	No. of Affected Village	No. of People Seriously Affected ('000)		
					Male	Female	Total
Khulna	Dacope	7	6	112	71.19	70.28	141.47
	Koyra	10	2	46	29.38	32.15	61.53
Satkhira	Assasuni	13	3	41	33.53	34.15	67.69
	Shyamnagar	10	2	29	13.27	13.31	26.58
Total: 2	4	40	13	228	147	149	297

Source: Ministry of Food and Disaster Management 2009, and Banglapedia 2006

More than 500 thousand people among 800 thousand people of these areas directly affected by the cyclone Aila and more than 297,000 people took shelter on the embankments, educational institutions, other buildings and cyclone shelters. After the cyclone, 193 people including children victimised by death through drowning, shelved under broken houses, and by waterborne diseases⁶³. According to the reports published in the daily newspapers, more than 11 thousand people affected by waterborne diseases⁶⁴.

243,191 houses fully and 370,587 houses partially damaged in the affected four Upazilas.⁶⁵ Aman paddy of 97,000 acre of land including summer vegetables of these areas such as Okra, Bottle Gourd, Sweet Gourd, Pepper, Bitter Gourd, Mustard and Sesame has been damaged totally. Another 14,653 acre of shrimp farm and freshwater fishes of 3,400 village ponds (1,074 acre) has been submerged and damaged⁶⁶.

At least 1,500 livestock (cattle, buffalo and goat) and more than 150 thousand poultry resources has been damaged totally. As the poor people had now way in front of them, they sold their all livestock to the middlemen against only 10-15% of the actual rate. On the same way, the middlemen bought poultry and fishes at the same rate.

Primarily the people took shelter in the local educational institutions and from where all of the educational materials washed out by the storm surge. The books and other educational materials of the students also washed out from their houses. Children of poor sharecropper, agricultural labour, forest people and fishermen failed to collect

⁶² DMB (2009a). District-wise Damage Report. Disaster Management Bureau (DMB). Ministry of Food and Disaster Management (MOFDM). Government of Bangladesh. Dhaka: 3 June 2009.

⁶³ Staff Writer, (2009). Reuters, retrieved on 26 May 2009

⁶⁴ Associated Press, Retrieved on 31 March 2009

⁶⁵ DMB (2009b). Situation Reports for Cyclone Aila. Disaster Management Bureau. Ministry of Food and Disaster Management. Government of Bangladesh. Dhaka: 11 June 2009

⁶⁶ K. Roy, H. Mehedi & U. Roy (2009). Initial Assessment of Cyclone Aila: Focus on Khulna District. Unnayan Onneshan, Humanitywatch and Nijera Kori. Khulna, June 2009

their educational materials after trying from possible each and every source. As a result, they have dropped out from the school. The number of examinee of HSC in August, second terminal examination of Primary Education in August and of Secondary Education in September has been decreased 9.3%, 34.3% and 22.7% respectively⁶⁷.

The local inhabitants of southwest coastal region of Bangladesh usually use surface water in daily lives collect safe drinking water from large village ponds which are reserved as rainwater reservoirs due to extreme salinity in ground water and rivers, canals and open water sources. Almost all of the reserved ponds have been submerged by the storm surge following cyclone Aila and contaminated with salinity and massive water scarcity spread out. For the first time in their life, the Aila affected people depend on outer sources for drinking water. Thousands of people are seen gathered in front of any boat or truck which supplied water for the Aila victims. People in some areas were trying to survive by collecting water from tube-wells which are 15-20 kilometres far from their community.

On the one hand, sufferings of safe drinking water are worsening day by day; and on the other hand, scabies were spreading out quickly due to polluted and logged saline water. Due to extreme salinity trees were started dying, houses were totally damaging and life and livelihood of the affected areas totally stopped⁶⁸.

As the cultivable lands were under water for a couple of months, farmers and agricultural labours had no work. Some of them were trying to survive by working in the 'Cash for Work' and 'Food for Work' schemes initiated by the government and humanitarian organisations. But the opportunities were too limited to survive with a family of 5 members (average size of Bangladesh). As a result of these consequences, a large number of people had to leave the areas for livelihoods security. It is estimated that, at least 88,000 people left the areas during May-June 2009⁶⁹. But the national and local newspapers reported that at least 125,000 people had to migrate to the cities including the neighbouring countries due to the disaster⁷⁰.

3.2 Causes of Sufferings

Bangladesh is known for its recurrent disasters like cyclones and floods. The people are capable to resilient these disasters at a level which is tremendous and well-known to the world. But in cyclone Aila, the people failed to cope with the disaster and had to leave the areas due to some significant causes:

- i. Owner of the shrimp farms had created holes on the embankment to pipe in salt water from the coastal rivers into their hatcheries. The shrimp enclosures even

⁶⁷ District Education Office (2009). Report of Educational Situation in Khulna District. Department of Primary and Mass Education. Khulna: July 2009

⁶⁸ IOM (2010). Joint Position Paper on Cyclone Aila: Priorities for Action. International Organisation for Migration. Dhaka: April 2010

⁶⁹ K. Roy & U. T. Sultana (2010). *ibid*

⁷⁰ Daily Purbanchal (2009). People are leaving the affected areas. Khulna: 22 August 2009

built small sluice gates to pump in salt waters, weakening the main structure⁷¹. Due to these subversive activities, the embankments could not resist the pressure of the storm surge and the saline water leaped in the localities.

- ii. Earthen embankments of these areas were constructed in 1960s under CEP and BWDB is responsible for proper management and maintenance of the embankments. During last four decades very poor management and almost zero maintenance of the embankments are done by this state owned department. The height and width of the embankments reduced naturally and loss its strength to protect the areas⁷².
- iii. A usual cyclone shelter in the coastal zones of Bangladesh has capability of 500-700 people. But there are cyclone shelters for every 9,000 people in the rural areas. Most of the houses of rural areas are made of mud or bamboo. As a result, many of the affected people could not take refuge in the Cyclone Shelters and trying to stay in the temporary huts or educational institutions. In some areas, cyclone shelters were also flooded and unusable due to inadequate location selection process and poor maintenance.
- iv. A large number of affected people took shelter on tiny embankments which were not broken. Women including the adolescent girls were facing severe problem of sanitation and personal privacy in the small temporary huts. Besides they were facing sexual harassments on the crowded embankments.
- v. Due to water logging, people could not move from their temporary shelters to collect commodities and daily food. As a result, older citizens and children are being affected by serious malnutrition and transmitted diseases.
- vi. Bangladesh Meteorological Department (BMD) ignored the lunatic position and high tide, and forecasted that the storm surge of cyclone Aila may not harm the localities. For that reason, people were not ready to take shelter in a safer place with their valuable belongings and they lost all when the saline water washed out their homes.
- vii. the poor rural people are not interested to refuge in the cyclone shelter left their livestock and other belonging because they had experienced stolen of their belongings and livestock after leaving homes considering the cautionary signals from BMD.

3.3 Cyclone Aila Displaced People

Mainly the cyclone Aila affected people did not start migration just after the cyclone hit the areas. They tried to survive in the areas for at least one week after Aila. But when water scarcity with food crisis arisen, they had to migrate to the nearby cities

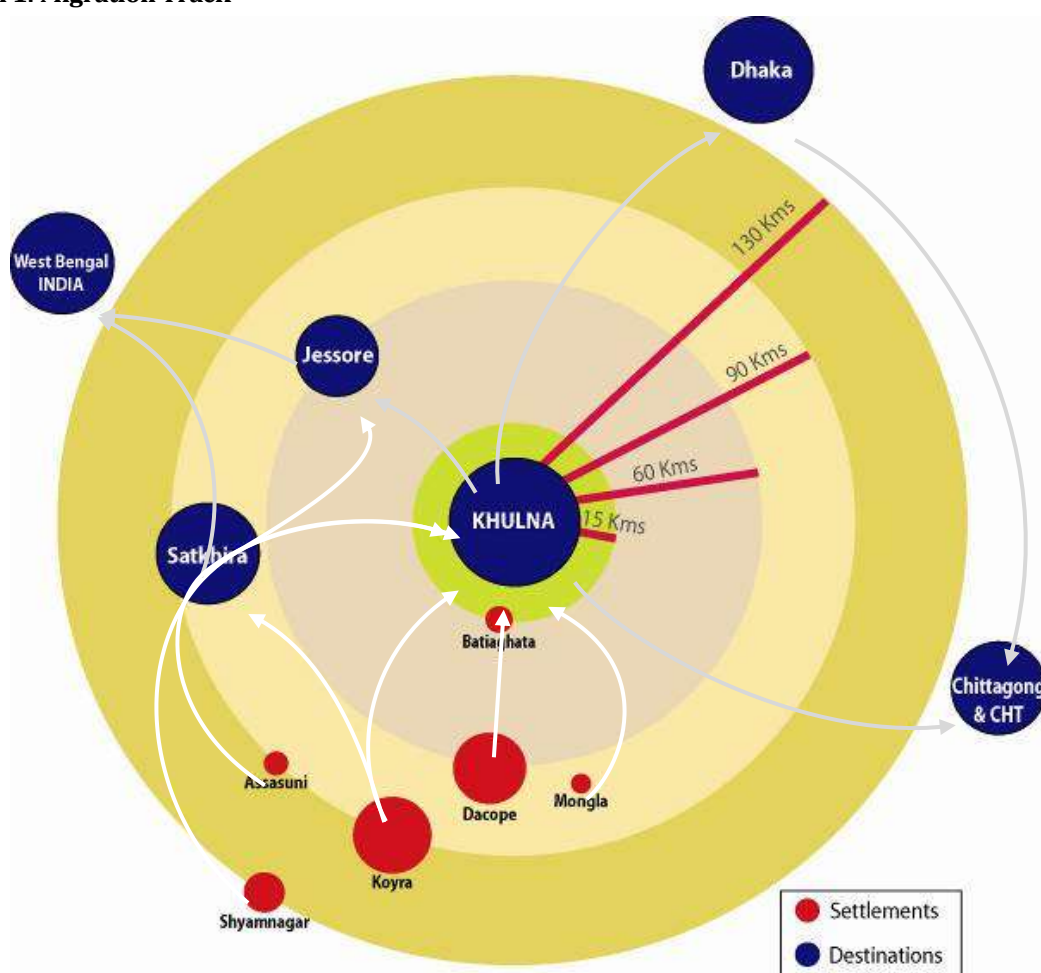
⁷¹ Washim Bin Habib (2009). "Aila-hit embankments still await reconstruction", The Daily Star, Dhaka, November 7, 2009

⁷² Ziaul Hoque Mukta (2010). Bangladesh: Testimony of Journalists - on Swelled Sufferings of Aila hit People in One Year. Oxfam. Dhaka: May 2010 retrieved from www.reliefweb.int/node/355533/pdf on 13 June 2010

and urban areas. According to the FGD Reports organised by CLEAN, total 123,000 people migrated from the affected areas out of which 27.64% from Dacope Upazila, 34.15% from Koyra Upazila, 29.27% from Shyamnagar Upazila and 8.94% from Assasuni Upazila. The figures of Aila migrants are shown in Table 4:

SL #	District	Upazila	No. of Union	No. of Migrated People
1.	Khulna	Dacope	2	34,000
		Koyra	6	42,000
2.	Satkhira	Shyamnagar	3	36,000
		Assasuni	2	11,000
Total:	2	4	13	123,000

Diagram 1: Migration Track



Number of migrated people is shown by the size of circle. White lines show the primary destination and gray shows secondary and tertiary destinations. Actual distances are not shown for Destination out of Box.

The people had firstly migrated to the nearby urban areas like Satkhira, Paikgachha and Batiaghata town and Khulna city to survive. After a few days (7-15 days) they migrated further to the bigger cities like Khulna and Jessore. On the third step, some of them migrated to the capital city Dhaka, the commercial city Chittagong or to the cosmopolitan city Kolkata of neighbouring country, India. Even some of them

migrated to CHT⁷³ for selling labour as they could not secure their livelihood in the areas. The track of forced migration from the Aila affected area is shown in Diagram 1:

Among the total Aila refugee about 15,000 people took shelter in Khulna city and involved in odd jobs like rickshaw pulling, daily labour, temporary wages and agricultural labour. Most of the migrated people are concentrated in the Sonadanga area which is a terminal for inter-district bus transport.

During the study the people from Aila affected area found in 41 slums and localities in KCC and the peri-urban areas of the city. The peri-urban areas are mainly in the jurisdiction areas of 3 Upazilas namely Batiaghata, Rupsa and Dumuria Upazila under Khulna district and adjacent to the city. Other areas are under 5 Thana (Police Station) of Khulna Metropolitan.

A lot of community of the displaced people are found in the Sonadanga police station and poor number in Dumuria Upazila. As a very tiny area of Dumuria Upazila is adjacent to Khulna city, a very few found there though a large number of migrated people from Aila affected areas temporarily resettled in the adjacent villages of Dumuria Upazila headquarter. To find-out a destination affected homeless people took support from their relatives and friends. For that reason, houses of the migrants are scattered and not concentrated in an area. That is why, people from same localities or villages concentrated in the same slum. This may happened from unity of socioeconomic condition, insecurity of job and also urban amenities related unconsciousness. Housing areas of Aila migrant people are shown in Table 5:

SL #	Upazila/Thana	Locality/Slum	No. of Locality	%
1.	Khulna Sadar	Chanmari, Labanchara, Natunbazaar, Nirala adjacent area, Rupsa bridge area	6	14.63%
2.	Sonadanga	Sonadanga Bus Stand, Agrani Bank colony area, CSS School adjacent area, Gallamari Bus Stand, Khorar bosti area, Najirghat	11	26.83%
3.	Khalishpur	Kashipur, Rayermahal, Hamidnagar, behind the Shishu Park	4	9.76%
4.	Daulatpur	Mohsin Moor, Aranghata, Khamarbari, Khamarbari, Kalpotaru market area, Deyana, Kabir Battala	9	21.95%
5.	Khanjahan Ali	Badamtala, Shiromoni, KUET adjacent areas	3	7.32%
6.	Batiaghata	Embankment adjacent to KU, Mohammadnagar, Nijkhamar area	3	7.32%
7.	Dumuria	Thukra	1	2.44%
8.	Rupsa	Aitchgati, Talimpur, Bagmara, Jabusha	4	9.76%
Total			41	100.00%

Aila suffered people from Koyra and Shyamnagar are dominant in the southern part of Khulna City. On the other hand, suffered people of Dacope took shelter mainly in

⁷³ Robin Munda (2009). speech in Regional Climate Poverty Hearing. Coastal Campaign Group of Campaign for Sustainable Rural Livelihoods (CSRL). Khulna: 14 November 2009.

the Mohammadnagar and Nijkhamar of Batiaghata Upazila. People from several areas gathered in Sonadanga and Daulatpur thana areas as these are the entry points to Khulna city.

After analyzing the area of taking shelter it is seen that the trend of taking shelter is concentrated in under-developed pockets which are near to the centre of Khulna city. The Aila victims' density in midtown is lowest while it is highest at the boundary of the city.

Among the migrants highest people took place in the Daulatpur Thana (21.2%) and then Khulna Thana (19.2%), Sonadanga (15.6%), Khalishpur (14.2%), Batiaghata

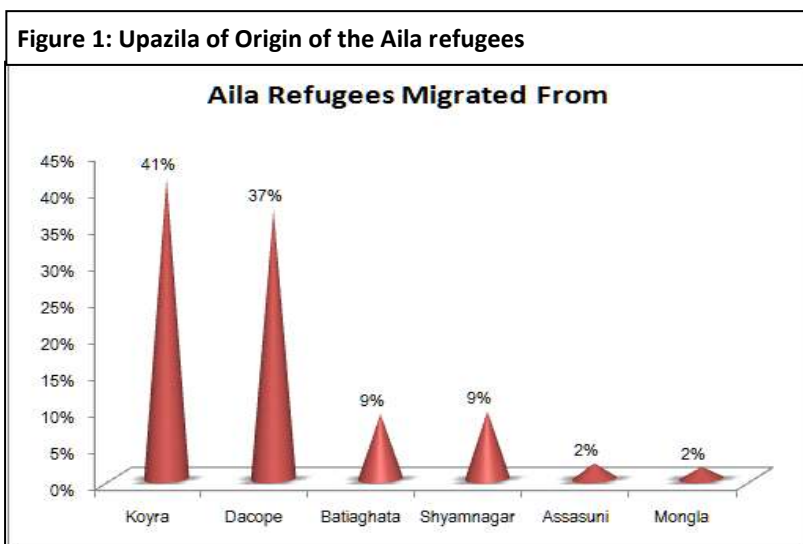
(11.7%), Rupsa (7.2%), Khanjahan Ali (6.9%) respectively. The least number of people were seen in Dumuria Upazila area (4%).

During the study, a total of 14,551 people in 2,856 families of Aila affected people are found in the Khulna city and its peri-urban areas. Out of them, 14.7% family have elder

relatives like maternal and paternal grandfather, uncle etc. along with their regular family members. 27.2% family have additional member from their relatives along with the family members. The average number of family members found 5.2 per HH which are higher than the average of Bangladesh (4.7 per HH) and threatening their livelihoods. Among the Aila migrants 49.63% male, 51.37% female and 23.74% children of age under 15 years.

Most of the people from the nearer affected areas like Koyra and Dacope migrated to Khulna city. Besides, migrants from Shyamnagar and Assasuni Upazila of Satkhira district and Mongla Upazila of Bagerhat district also took shelter in the city. The migrated people are mostly from Koyra Upazila (41.18%) and then from Dacope (36.87%), Shyamnagar (9.28%), Batiaghata (8.89%), Assasuni (2.15%) and Mongla (1.64%). Following figure 1 shows the ratio of displaced people from where they were migrated.

Shyamnagar under Satkhira district is one of the most victimised Upazilas affected by cyclone Aila. But the migrated people in Khulna from this area are less than Dacope and close to Batiaghata which was very mild affected by the cyclone. Distance between Shyamnagar and Khulna is more than 130 kilometres. It may be the most possible cause of less concentration from Shyamnagar. Mongla was very less affected by cyclone Aila. But lack of the working opportunities just after the cyclone may be the major cause which pushed them to Khulna city.



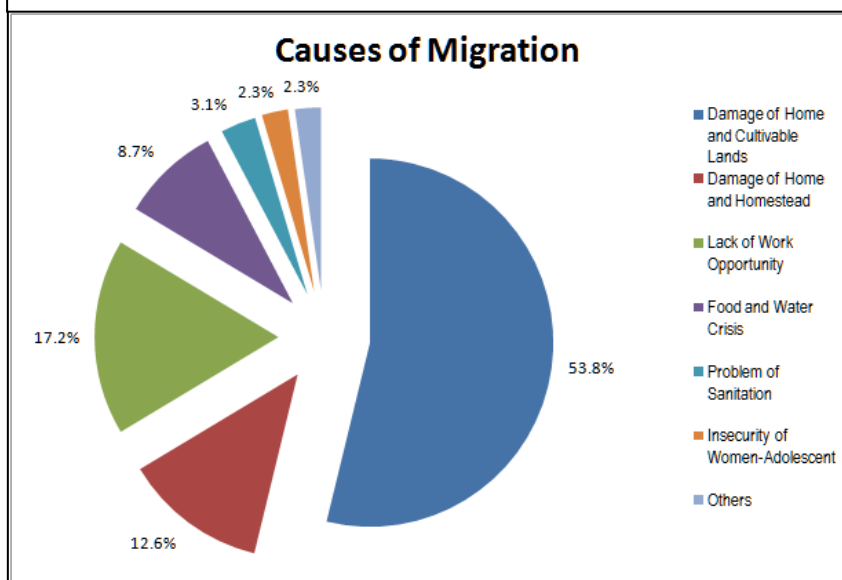
PART 4

KEY FINDINGS AND CONCLUSION

4.1 Causes behind displacements

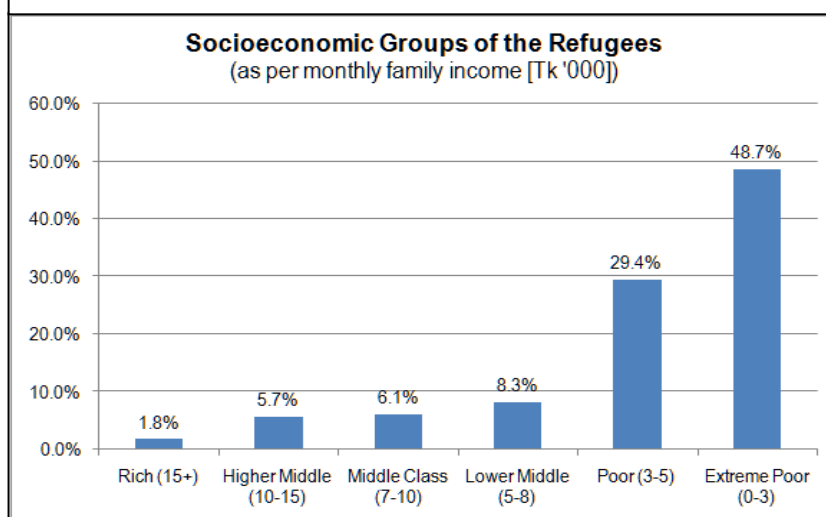
Among the migrated people of Cyclone Aila 74.4% respondents main living houses have destroyed. Their homestead and cultivable lands were also inundated by saline water of storm surge while 11.6% had only homestead lands and those were totally damaged. Besides 7.9% have no homestead land of their own. This type of displaced people had been working in shrimp farms or cultivable lands owned by the influential rich persons of their own areas and lived in the fellow lands of those persons.

Figure 2: Causes of Migration



There are various causes behind the migration. Lion part of the migrated people expresses that they had to migrate due to loss of houses, belongings and cultivable lands while 12.6% left their localities due to damage of houses and homestead lands,

Figure 3: Upazila of Origin of the Aila refugees



as they have nothing more than those. 17.2% left their areas as there were a very few opportunity of work or getting food and water support. Some of the respondents (2.3%) also left their areas due to insecurity of women and adolescent girls when they started living on the embankments.

The data shows that the earning members who are responsible to maintain their family members'

expenditure migrated first from the communities. These groups are the major working force of the country also. Due to their responsibilities and capability of selling the labour, people of these age-groups migrate very fast from the affected areas though women and children suffer the most in any natural and manmade disastrous situation.

4.2 Who has been displaced?

According to the findings of the study, a large portion of extreme poor migrated to the urban areas. As they have very limited belongings in their own locality. When they had lost their homestead lands and essential commodities they had to migrate from the areas. Among the respondents, 48.7% are from extreme poor backgrounds while 29.4% from poor, 8.3% from lower middle class, 6.1% from middle class, 5.7% from higher middle class and only 1.8% from rich family backgrounds. Here,

Table 6: Socioeconomic Category of Refugees according to Income Range

SL #	Category	Income Range (per family per month)
1.	Rich	Taka 15,000+
2.	Higher Middle Class	Taka 10,000-15,000
3.	Middle Class	Taka 7,000-10,000
4.	Lower Middle Class	Taka 5,000-8,000
5.	Poor	Taka 3,000-5,000
6.	Extreme Poor	Taka 0-3,000.00

socioeconomic background categorised as shown in Table 6.

Since the study is conducted in the slums of peri-urban pockets in Khulna city and adjacent areas, the rich people are found very few because, usually the rich people took shelter in the recognised residential areas with sufficient citizen services.

The severe situation was faced by the middle class income group who have lost their belongings and had to spend the last penny of savings as they could not reach any food or other relief for cultural rituals, otherwise social dignity. They are found 20.1% including the higher and lower middle class.

The poorest and the poor communities had left their areas at the first shaking of cyclone Aila as they have to live on hand to mouth and totally depend on daily income through labour. The other classes including lower middle class migrated after a few days when they failed to survive in their ancestral home by their own capacity or resources.

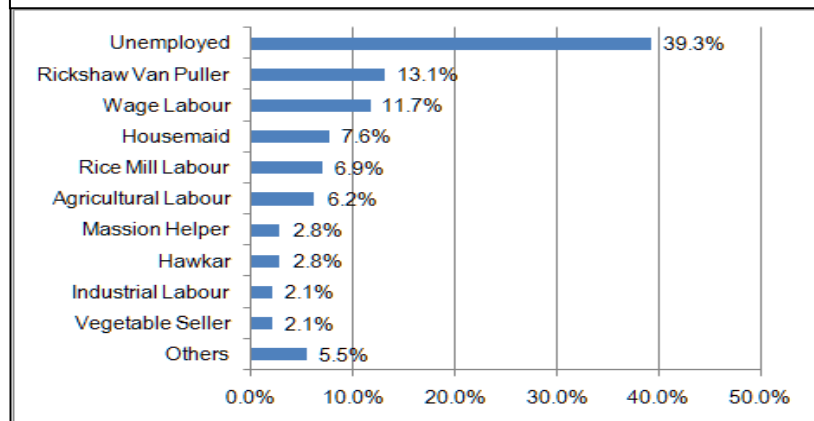
4.3 Dwellings of the Displaced People

Most of the displaced people were found in the slums located in peri-urban areas of Khulna city, with very limited citizen services. More than 50% migrants live in mud-made houses against a rent of 200-300⁷⁴ taka per month. One-fourth of the HHs foundation made of bricks/ concretes and roof made of corrugated iron sheet. Only 7.2% displaced people live in brick-made houses with concrete roof. 93.6% dwellers

⁷⁴ Taka 70 is equal to 1 US Dollar (as per June 2010)

have access in electricity for only light and they pay 100 taka. Comparatively solvent migrated people have to pay more 200 taka for each of the electric fan. Usually the owners of the slums switch off the fan and light after 10:00 PM at night.

Figure 4: Occupation of the Refugees

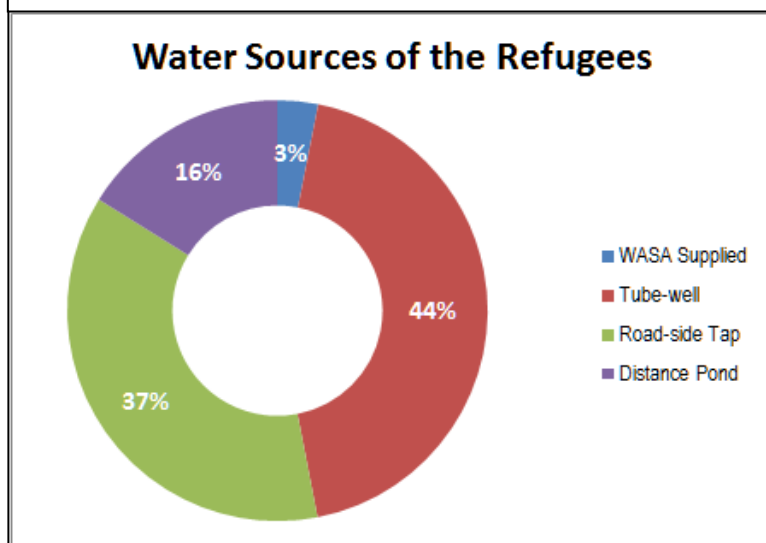


4.4 Livelihoods of the Displaced People

As the Aila Migrants took help from their relatives or known persons of their area to take job opportunities and shelter in Khulna city, it has to be noted that higher than 80% of them took livelihood of their known relatives who has given the shelter also. During the study timeline, it is found that 39% of the migrant people are workless. Besides 37% displaced people are working only 3-4 days a week. 78% answers that they cannot collect enough food for more than twice of the day by their income.

Among the respondents 23.8% Aila migrants are rickshaw/van puller, 21.3% are day labour, 13.8% are housemaid, 11.3% are rice-mill labour, 8.8% are agro-labour, 5.0% are mason helper, 3.7% are hawker, 2.5% are temporary labour of factory, and 2.3%

Figure 5: Water Sources of the Refugees



are small vegetable seller. Besides other sector livelihoods contributed to 8.6% of the migrants. The ratios of different livelihoods are shown in figure 3.

The highest incomes from these types of livelihoods are not more than 75.57 taka per day. Considering average HH member-size, the daily average income

estimates only 14.82 Taka per head. Highest income has gained by rickshaw/van pulling which is daily average 143.79 taka per HH and lowest income has shown in housemaid which is daily average 27.13 Taka per HH. Mill/factory labour is the most recognized formal worker but their daily average income is daily 32.73 taka per HH, much lower than non-recognized sectors.

4.5 Access to the Water and Sanitation

As KCC has no additional mechanism of water supply and sanitation mechanism, only 2.7% of the migrants get safe water which is supplied by Khulna WASA. Besides, 38% migrants use the tube wells of the slum owner. A large portion of displaced people (32%) collect their water from common tube wells or taps by the roads. The alarming information is 14% migrants use the water from far reachable ponds or tube wells.

Within the forced displaced people by cyclone Aila, 1 latrine is used by every forty person in their settlements. As a result, vulnerable condition of sanitation for children and women remain unchanged by which they were facing in the affected areas. 58% latrines are found unsafe for personal health and hygiene. 21 percent latrines' water seals have been broken and flies found over the pan and slabs. Some of the latrines are connected with adjacent drainage line by pipe and human waste are found floating in the dirty water of adjacent places of the latrine for breaking security cover.

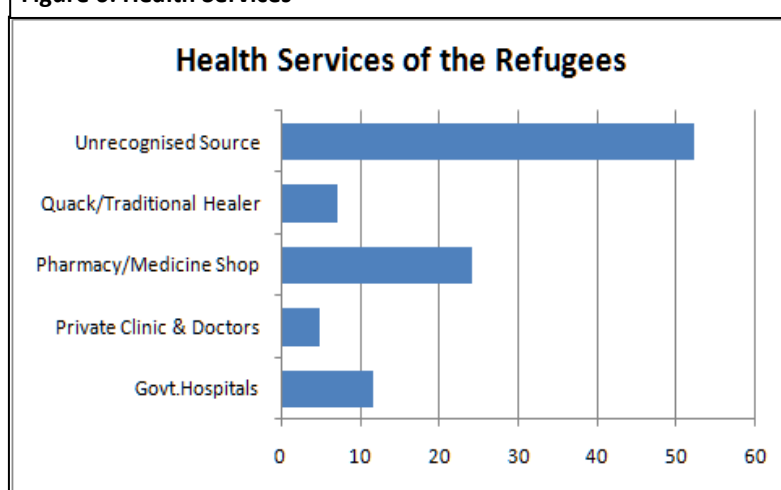
4.6 Education Services for the Displaced People

During cyclone Aila, the educational institutions like schools and colleges of the areas were flooded by storm surges. Besides these institutions are relatively in higher than the locality and so many forced migrants took shelter in. As a result, the regular education of those institutions had been stopped. As this hazard has occurred in the middle of the year, government and non-government institutions have shown their reluctant to readmit of the migrant children.

As a result, the children of those areas have outside from the

education for a year. During the study period, only 6.7% children are going to the school. Among them 1.6% are attending in NGO directed by NGOs and 5.1% are in government or registered primary schools. 93.3% children have no access in regular education. 11% children are involved in some hazardous job like house-labour, rickshaw-cycle garage etc.

Figure 6: Health Services

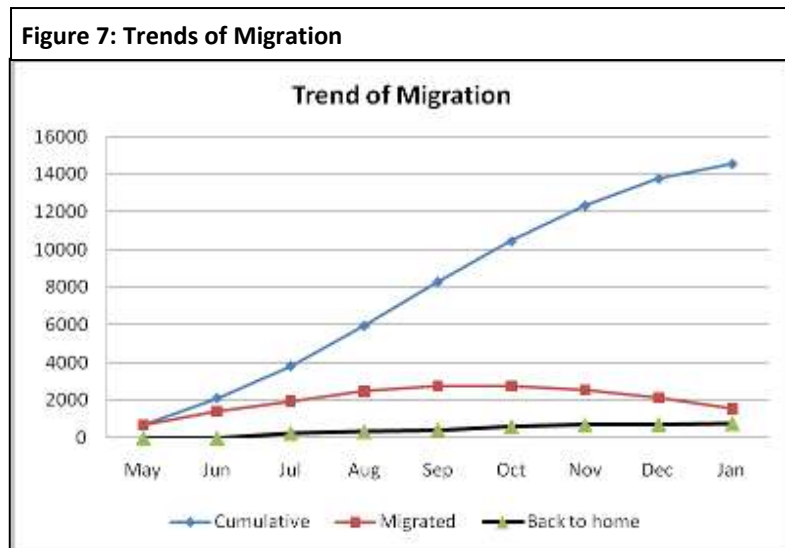


4.7 Basic Health Services

The role of NGOs is significantly important for the development of extreme poor communities of Bangladesh. But during last seven months after hit of cyclone Aila none of the NGOs has come forward for help of those forced migrants. Contrarily,

microcredit organizations have visited those slums and other shelters to realising the instalments.

Only the health workers of Extended Programme for Immunization (EPI) have made connection to the settlements for given vaccine. The most striking information is the existing Urban Primary Health Care



Programme (UPHCP) or NGOs are not giving any health facility to the migrants. According to the survey, among the migrants only 11.6 percent get health services from government hospitals, 4.9 percents from private clinic and physicians and 24.1 percents from pharmacy and medicine shops. In addition, 7.2% of the respondents take treatment from quack or traditional healers.

4.8 Trends of Displacement

Displacement and insecurity of life and livelihoods are interrelated with each another. The people, especially the extreme poor and vulnerable people, tried to sustain in the affected areas. After 3-5 days the migration started from Koyra, Dacope and Shyamnagar. Lack of job opportunities and economic instability also related with migration trend. The survey shows that 1.9% of total displaced people migrated to Khulna city within 5 days after cyclone Aila while 43.4% migrated between 15-30 days after the cyclone. Another 46.4% migrated to Khulna city between 1 and 2 months after the disaster. The rest of migrants (18.3%) took shelter in the city after 3 months of the cyclone.

If the situation remain unchanged or recover slowly, the trend of migration may be increased. The figure 7 shows that in after September 2009, the displaced people started to back home at a very minimum level. The trend continued as some incentives i.e. house building grants from Prime Minister's office, Agricultural support from FAO and other livelihoods support from local and international NGOs encouraged the forced migrants to go back home. But the embankments were remaining breached and people have no choice but stay in the city slums.

PART 5

RECOMMENDATIONS

The recommendations of this study are settle down mainly in two folds. The present situation of miserable livelihoods and also future uncertainty are to be noted. We have combined the recommendations of the members of the study team including Khulna city's migrated people on spot. The participants of the study recommended for very emergency measures with a harsh tone of voice. On the other hand, the study team recommend for national and international policy reformation and legitimate actions which are related with climate change, CIDPs and resettlement measures. The recommendations are also related with the development approach for the southwest coastal region to save lives, livelihoods and culture.

5.1 Recommendations from the Study Participants

1. Providing adequate food, safe water supply, standard health services, safe sanitation and quality education to the migrated people forced by cyclone Aila;
2. Completing reconstruction works of the damaged embankment, which was breached by cyclone Aila, before upcoming monsoon for why the displaced people may start their normal life after going back to their own settlement;
3. Providing emergency and essential requirements to the forced migrated people for reconstruction of housing and agricultural inputs (seed, fertilizer and irrigation). That's why marginal and share croppers can recover their traditional their livelihoods;

5.2 Recommendations from the Study Team

5.2.1 National Level

1. Policy formulation and review for resettlement and livelihood security with dignity of the Climate Induced Displaced People;
2. Adequate measures including training for skill development of the vulnerable people so that they can be efficient citizen of the country. Additionally, bilateral and multilateral negotiations with developed countries are important for safe migration of the CIDPs in abroad;
3. Appropriate policy reformation actions for stopping saline water shrimp farming in the southwest coastal zone considering food security and traditional livelihoods of the region. Additionally, sufficient support to the scientists and the farmers to grow saline tolerant cropping;
4. Amendment of the Embankment Protection act 1952 and incorporate financial penalty for cutting, drill or or any type of subversive activities against the embankments;
5. Initiating Tidal River Management (TRM) in the coastal region and ensure active participation of marginal farmer's in coastal embankment management for ecology based sustainable livelihoods;

6. Banning cordon approach in river and water management initiate silt management by opening all of the dams and embankments which make barrier on the water channels;
7. Ensuring Environmental Impact Assessment (EIA) and community participation through public hearing before undertaking mega-projects in the coastal region;

5.2.2 International Level

1. Reducing carbon foot print of Annex-1 and industrialised rich countries to minimise the adverse impacts of climate induced disastrous weather events;
2. Organising a different convention under UN system to recognise the Climate Induced Displaced People (CIDP) as 'Universal Natural Person' and to provide proper legitimate support for free movement across the border;
3. Allowing the CIDPs to resettle in industrialised rich countries as their fundamental rights derived from ecological credits;
4. Providing enough financial and technological support from the Annex-1 countries for LDCs and MVCs like Bangladesh to foster resettlement and capacity building activities and to ensure essential services for the CIDPs;

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